PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference		G E DOTTIDE A /41 C								
2003P02187WO	FOR FURTHER ACTION	See Form PCT/IPEA/416								
International application No.	International filing date (day/month/year)	Priority date (day/month/year)								
PCT/EP2004/000320	16.01.2004	16.04.2003								
International Patent Classification (IPC) or national classification and IPC										
Applicant										
SIEMENS AKTIENGESELLSCHAFT										
This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.										
2. This REPORT consists of a total of		a this cover sheet								
3. This report is also accompanied by A		g uns cover sheet.								
	_									
	to the International Bureau) a total of 9	sheets, as follows:								
sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).										
sheets which supers	ede earlier sheets, but which this Authority con	siders contain an amendment that goes beyond								
the disclosure in the Box.	e international application as filed, as indicated	in item 4 of Box No. I and the Supplemental								
	Demonstrated of (indicate type and number	or of alastronia astrians)								
b (sent to the International.	Bureau only) a total of (indicate type and numbe	of electronic carrier(s))								
, containing a sequence listing and/or tables										
related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).										
4. This report contains indications relati	ng to the following items:									
Box No. I Basis of the	renort									
	report									
Box No. II Priority										
Box No. III Non-establi	shment of opinion with regard to novelty, inven	tive step and industrial applicability								
	ty of invention									
	Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement									
Box No. VI Certain doc										
Box No. VII Certain def	Box No. VII Certain defects in the international application									
Box No. VIII Certain observations on the international application										
Date of submission of the demand	Date of completion of the	nis report								
		-								
Name and mailing address of the IPEA/EP	Authorized officer									
Facsimile No	Telephone No.									

Translation

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/EP2004/000320

Box	No. I		Basis of the report					
1.			to the language, this report is based on the internation der this item.	al application in the language in	which it	was filed, unless otherwise		
			port is based on translations from the original languag is the language of a translation furnished for the purpo			,		
		<u>□</u> ;	nternational search (Rule 12.3 and 23.1(b))					
		، 🖳	publication of the international application (Rule 12.4)					
		L i	nternational preliminary examination (Rule 55.2 and/o	or 55.3)				
2.	recei		to the elements of the international application, this r fice in response to an invitation under Article 14 are					
		the int	ernational application as originally filed/furnished					
	\boxtimes	the des	scription:					
		pages				as originally filed/furnished		
		pages*	1-8	received by this Authority on		.2005 with letter .02.2005		
		pages*		received by this Authority on				
	\boxtimes	the cla	ims:					
		nos.				as originally filed/furnished		
		nos.*			r with an	•		
		nos.*			16.02	.2005 with letter		
		nos.*	1		01 13	.02.2003		
	\square			received by this Authority on				
			awings:					
		sheets				as originally filed/furnished		
		sheets		received by this Authority on				
	_	sheets		received by this Authority on				
		a sequ	ence listing and/or any related table(s) - see Suppleme	ental Box Relating to Sequence L	isting.			
3.		The ar	mendments have resulted in the cancellation of:					
			the description, pages					
			the claims, nos.					
			the drawings, sheets/figs					
			the sequence listing (specify):		,			
4.			eport has been established as if (some of) the amenda ave been considered to go beyond the disclosure as fil	nents annexed to this report and	listed be	elow had not been made, since		
			the description, pages					
			the claims, nos.					
			the sequence listing (specify):					
*	If ite		plies, some or all of those sheets may be marked "supe					

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/EP2004/000320

Box			ticle 35(2) with regard to novelty, inventive step or industrial applicability; oporting such statement	
1.	Statement			
	Novelty (N)	Claims	1	YES
		Claims		NO
	Inventive step (IS)	Claims	1	YES
		Claims		NO
	Industrial applicability (IA)	Claims	1	YES
ļ }		Claims		NO
I				

- 2. Citations and explanations (Rule 70.7)
 - 1. Reference is made to the following document:
 - D1: WO 03/008248 A (PBR AUSTRALIA PTY LTD; WANG NUI (AU)), 30 January 2003 (2003-01-30)
 - 2. Document D1, which is considered to be the prior art closest to the subject matter of claim 1, discloses the following (the references in parentheses are to D1):

A parking brake with an electric motor, a cable pull device for actuating the brake, and a counter-rotary cable deflection system using two deflecting rollers for two interconnected brake cables that operate in substantially opposite directions, the deflecting rollers being arranged so that the line joining the axes of rotation of at least two deflecting rollers can be turned with respect to the main drive axis.

3. The subject matter of claim 1 differs from what is known from D1 in that the parking brake has a fixed deflecting roller (19) and a rotatable deflecting roller (20), the rotatable deflecting roller (20) being mounted on a pivot

International application No.
PCT/EP2004/000320

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

arm (21) which can be pivoted by a drive shaft (12) driven by the electric motor (2). To reduce the torque on the drive shaft (12) the deflecting rollers (19, 20) and the pivot point of the pivot arm (21) are arranged so that when the parking brake is applied the moments exerted by the tractive forces (F) of the brake cables (3, 4) about the pivot point of the pivot arm at least partially or fully compensate each other.

The subject matter of claim 1 is therefore novel (PCT Article 33(2)).

- 4. The problem addressed by the present invention can thus be seen as that of designing a parking brake with a cable deflection system that can reduce the moment exerted on the pivot arm when the brake is applied.
- 5. The solution proposed in claim 1 of the application involves an inventive step (PCT Article 33(3)) because the idea of using two deflecting rollers, only one of which is pivotable, is not obvious. The deflecting rollers are arranged so that when the parking brake is applied the moments exerted by the tractive forces of the brake cables partially or fully compensate each other.